

REMARKS

Entry of the foregoing amendments and reconsideration of the above-identified application are respectfully requested in view of the remarks that follow.

I. Claim Status:

Claims 1, 3-8, 10-14 and 19-27 are currently pending. By this response, claims 1, 8 and 21 have been amended. No new matter has been introduced.

II. Obviousness-type Double Patenting Rejection:

Claims 1, 3-14 and 19-27 have been rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-12 of U.S. Patent No. 7,298,932 (hereafter "Patent '932").

In response, Applicants respectfully traverse the obviousness-type double patent rejection, and submit that the foregoing claims are patentably distinguishable over those of Patent '932. Should, however, the pending claims become allowable except for the obviousness-type double patenting rejection, Applicants will consider filing a terminal disclaimer to obviate the obviousness-type double patenting rejection.

III. Rejections Under 35 U.S.C. §103:

Claims 1, 3-8, 10-14 and 19-27 have been rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,499,294 to Friedman (hereafter "Friedman") in view of U.S. Patent No. 6,330,051 to Takanashi Teruo (hereafter "Takanashi").

Applicants respectfully traverse the foregoing rejections to the extent that such rejections may be considered applicable to the claims. More specifically, Applicants submit that the Office Action (as discussed below) fails to establish *prima facie* case obviousness and as such the pending claims cannot be considered obvious over the cited references.

Notwithstanding the above and in the interest of compact prosecution, Applicants have amended the pending claims to further clarify the claimed subject matter. In particular,

claim 1 has been amended to recite, *inter alia*, that the “control unit notifies a user that the digital image has been altered, by avoiding the additional information from being displayed, if said verification unit verifies that the digital image has been altered.” The foregoing amendments have been made solely for clarifying claimed subject matter, by rephrasing certain features of independent claims 1, 8 and 21. Thus, Applicants assert that the scope and merits of the claims has not been affected.

In accordance with at least one non-limiting embodiment of the present invention, e.g., as illustrated in FIG. 12, the specification describes at page 21, line 17, to page 23, line 1, as follows:

Step S1006: if the two hash values do not coincide with each other, the main controller 210 displays "NG" in the verification result column, as shown in FIG. 12. "NG" is information representing that the selected image file is an image file determined to have been "altered". If the selected image file is an image file determined to have been "altered", accessory information in the area 401 may have been altered. To notify the verifier that accessory information (thumbnail image, photographing date & time, shutter speed, F-number, ISO sensitivity, size, model name, manufacturing number, and the like) obtained from the area 401 of the selected image file may have been altered, the main controller 210 changes the display form of the accessory information in the list window for the selected image file determined to have been "altered".

As change examples of the display form, the first to third display forms will be explained. In the first display form, all pieces of information displayed in the columns for the thumbnail, photographing date & time, shutter speed, F-number, ISO sensitivity, size, model name, and manufacturing number are erased. [...] Another display form can also be adopted as far as the display form can notify the verifier that accessory information of the selected image file may have been altered.

Thus as described and illustrated, the non-limiting embodiment shown in FIG. 12 indicates that “if the two hash values do not coincide with each other, the main controller 210 displays ... the verification result”. “In the first display form, all pieces of information displayed [...] *are erased.*” (Emphasis added). That is to say, the “control unit notifies a user that the

digital image has been altered, by avoiding the additional information from being displayed, if said verification unit verifies that the digital image has been altered.” Accordingly, in the foregoing embodiment a user is readily notified that the digital image IMG_0002.TIF has been altered, by avoiding the additional information from being displayed. Similar features are described at page 25, line 16, to page 26, line 27, referring to the non-limiting embodiment of FIG. 13.

The Friedman reference discloses a digital camera equipped with a processor for authentication of images produced from an image file taken by the digital camera. (Abstract). For authentication of the image file, means for hashing the image file in question produces a checking hash, and means for decrypting the digital signature using the public key reveals the true hash produced by the digital camera system from the true, plain text image file and means for comparing the checking hash with the true hash. If the two hashes match, it is certain that the image file is authentic, i.e., that the image file has not been altered. (C4, L47-54). In reference to FIGs. 3a -3c, Friedman discloses that “If these two hashes match, it is certain to any required degree that the digital image in question is indeed identical to what the digital camera system 10 originally produced. If, on the other hand, even one single bit in the image being authenticated has been altered, the two hashes will not even closely match and the image's authenticity will be indicated as not being affirmed by an authenticity output signal A; otherwise the comparator will indicate authenticity by an output signal A.” (C6, L46-52).

Thus Friedman merely discloses a system for encrypting and authenticating images, which at most would correspond to the claimed “verification unit which verifies whether a digital image included in an image file has been altered”. Friedman, however, fails entirely to disclose “a control unit which changes a display form of additional information included in the image file if said verification unit verifies that the digital image has been altered, wherein said control unit notifies a user that the digital image has been altered, by avoiding the additional information from being displayed, if said verification unit verifies that the digital image has been altered, and wherein the additional information includes a thumbnail image of the digital image,” as recited in amended claim 1.

In the Office Action, the Examiner concedes that Friedman is deficient at least in that Friedman does not explicitly describe the features of the control unit that avoids displaying the additional information, if the verification unit verifies that the image has been altered¹. In an effort to fulfill Friedman's deficiency, the Examiner cites Takanashi as teaching the aforementioned feature.

The Takanashi reference is directed to an image processing apparatus in which a test operation of each image can be executed smoothly by effectively utilizing magnetic information or optical information (i.e., collateral information including photographic information), which is recorded on a recording medium. During test processing, when the number of frame images to be displayed on a test image 204 is less than 28, a display mode of magnetic information to be displayed correspondingly to the frame images is altered to the form of words and phrases. Further, when the number of frame images to be displayed on the test image 204 is 28 or more, the display mode of magnetic information to be displayed correspondingly to the frame images is altered to the form of abbreviation (FFy). (Abstract). A display control means allows enlargement of the region in which all or a portion of the collateral information of the image is displayed, and when the region is enlarged, the display control means increases collateral information to be displayed. The display control means effects deleting images other than the selected one image and collateral information of the images, to thereby allow enhancement of the selected one image, and the display control means displays the collateral information of the selected one image in the deleted region. (C3, L44-57).

Accordingly, as summarized above, Takanashi discloses an image processing apparatus in which "collateral information" is always displayed in one form or another depending only on the number of images being tested. Takanashi is completely unrelated to image verification/authentication.

In the Office Action, the Examiner asserts that "Takanashi in the same field of authentication and verification." (Office Action, page 6). Applicants respectfully disagree. As outlined above, Takanashi discloses testing of a plurality of images for enhancement of such images, wherein "the operator can smoothly execute the test operation for each image while

¹ See the outstanding Office Action at page 6, lines 10-12.

effectively utilizing the collateral information recorded on the recording medium.” (Takanashi C2, L46-49).

In addition, the Examiner contends that Takanashi “teaches (column 3, lines 30-56, information display means which displays information; and a display control means ‘effects deleting images (avoids displaying)’ other than the selected (authenticity) one image and collateral information of the images, to thereby allow enhancement of the selected one image, and the display control means display the collateral information of the selected one image in the “deleted” region, also Fig. 9 and 10, column 12, line 55 through column 13, line 22, image 204 including images of four frames (refer to thumbnail), a enclosing line 212 (enhancement) which shows an image corresponding to the image of the one frame of the print preview image 206 is displayed. The enclosing line 212 allows the operator to easily understand which image of the test image 204 the one frame of the print preview image 206 corresponds to.” (Office Action, pages 6-7).

Applicants respectfully disagree with the Examiner’s characterization of the Takanashi reference. In particular, Applicants note that Takanashi’s passages, as cited by the Examiner, do not fulfill Friedman’s deficiencies. Takanashi discloses that “The display control means effects deleting images other than the selected one image and collateral information of the images, *to thereby allow enhancement of the selected one image*, and the display control means displays the collateral information of the selected one image in the deleted region.” (Emphasis Added). FIG. 9 schematically shows a film monitor image, a test image, and a print preview image. Thus, the operator can smoothly execute the test operation for each image while effectively utilizing the collateral information recorded on the recording medium. This is not equivalent to “a control unit which changes a display form of additional information included in the image file if said verification unit verifies that the digital image has been altered, wherein said control unit notifies a user that the digital image has been altered, by avoiding the additional information from being displayed, if said verification unit verifies that the digital image has been altered”, as recited in amended claim 1.

As a result, in Takanashi, the display control means merely replaces non-selected images with the selected images. Because, as the Examiner states, the display control means

displays the collateral information of the selected images in the “deleted” region, the user is not effectively notified as to which images are not selected based on the specific verification mechanisms (i.e., avoiding the additional information from being displayed, if said verification unit verifies that the digital image has been altered). In other words, Takanashi’s apparatus merely deletes the non-selected images so that the operator can smoothly execute the test operation, but without notifying the user which images are deleted.

Therefore, even if *arguendo* the teachings of Friedman and Takanashi were to be combined, the combined teachings would not obviate the above-discussed features of amended claim 1 that the control unit notifies a user that the digital image has been altered, by avoiding the additional information from being displayed, when the verification unit verifies that the digital image has been altered. Accordingly, amended claim 1 and claims dependent thereupon are patentably distinguishable over the cited references either taken alone or in combination.

Amended independent claims 8 and 21, and claims dependent thereupon, are patentably distinguishable over the cited references, either taken individually or in combination, for at least the reasons advanced for amended claim 1 to the extent that amended claims 8 and 21 each include features substantially similar to the above-discussed features of amended claim 1.

Accordingly the Applicants respectfully request withdrawal of the rejections of claims 1, 3-8, 10-14, and 19-27 under 35 U.S.C. §103 and prompt allowance of the subject application.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 1232-5362. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 1232-5362. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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